REMARKS

The Office Action dated March 28, 2005 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 34, 52, 54 and 58 have been amended. Claims 67-70 have been added. No new matter has been added, and no new issues are raised which require further consideration and/or search. Claims 34-70 are submitted for consideration.

Applicant wishes to thank the Examiner for indicating the allowability of claims 45-47.

Claims 34-63 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,724,813 B1 to Jamal et al. The rejection is traversed as being based on a reference that neither teach nor suggest the novel combination of features clearly recited in independent claims 34, 52, 54 and 58.

Claim 34, upon which claims 35-51 depend, recites a method for performing random access in a mobile communication network having a base transceiver station and a plurality of mobile stations. The method includes the steps of transmitting from the base transceiver station to the plurality of mobile stations, a parameter defining allowed access slots of at least one physically existing random access channel. The method also includes receiving the parameter at a mobile station and determining, at the mobile station, the allowed access slots based on the parameter and using, at the mobile station,

at least one of the determined allowed access slots for performing a random access operation to the base transceiver station.

Claim 52, upon which claim 53 depend, recites a system for performing random access in a mobile communication network. The system includes a base transceiver station arranged for transmitting a parameter defining allowed access slots of at least one physically existing random access channel. The system also includes a plurality of mobile stations arranged for receiving the parameter, for determining the allowed access slots based on the parameter, and for using at least one of the determined allowed access slots for performing a random access operation to a base transceiver station.

Claim 54, upon which claims 55-57 depend recites a network element for a mobile communication network including a plurality of mobile stations. The network element includes setting means for setting a parameter defining allowed access slots of at least one physically existing random access channel and transmitting means for transmitting the parameter to the plurality of mobile stations.

Claim 58, upon which claims 58-66 depend, recites a mobile station for a mobile communication network having at least one network element for allowing a random access operation. The mobile station includes receiving means for receiving from the network element a parameter defining allowed access slots of at least one physically existing random access channel for the random access operation and determining means for determining the allowed access slots based on the parameter received from the network element. The mobile station also includes transmitting means for transmitting a

random access message to the network element using at least one of the determined allowed access slots.

Claim 67 recites a method for performing random access in a mobile communication network. The method includes receiving a parameter defining allowed access slots of at least one physically existing random access channel for a random access operation and determining the allowed access slots based on the parameter. The method also includes transmitting a random access message using at least one of the determined allowed access slots.

Claim 68 recites a method for performing random access in a mobile communication network. The method includes the steps of receiving information about a set of available uplink access slots of a random access channel and deriving available uplink access slots, in a next full access slot set, for the set of available uplink access slots. The method also includes randomly selecting one access slot among the available uplink access slots for performing a random access procedure.

Claim 69 recites a method for performing random access in a mobile communication network. The method includes the steps of receiving a set of available RACH sub-channels, a RACH sub-channel defining a sub-set of a total set of uplink access slots. The method also includes deriving available uplink access slots, in a next full access slot set, for the set of available RACH sub-channels and randomly selecting one access slot among the available uplink access slots for performing a random access procedure.

Claim 70 recites a method for performing random access in a mobile communication network. The method includes the steps of receiving an access parameter message sent on a broadcast channel, the access parameter message defining allowed transmission slots in which random access channel transmissions are limited to occur, wherein the allowed transmission slots are dictated by slot offset and slot duration parameters. The method also includes calculating an allowed transmission slot based on the slot offset and slot duration parameters and transmitting a random access message using the allowed transmission slot.

As will be discussed below, the cited prior art reference of Jamal et al. fails to disclose or suggest the elements of any of the presently pending claims.

Jamal et al. teaches a connection-oriented external core network and a connectionless-oriented external core network that are coupled to corresponding service nodes each of which connects to a radio access network. Col. 4, lines 30-55. Radio access is based upon wideband Code Division Multiple Access (WCDMA) with individual radio channels allocated using CDMA spreading codes. Col. 4, lines 56-59. In the CDMA cellular telephone system, each base station cell transmits a synchronization signal to aid downlink acquisition and also transmits a Broadcast Control Channel (BCCH) which indicates system and cell overhead information. The synchronization signal is used by the mobile system to obtain initial system synchronization signal and to provide time, frequency and phase tracking ob the base

station transmitted signals. The BCCH also includes information about how to communicate with the system via common channels. Col. 6, lines 5 – 22.

If a mobile station wants to contact the network, or vice versa, such contact occurs initially over a common channel. Typical common channels in the downlink direction include a paging channel and a forward access channel. In the uplink direction, a random access channel (RACH) is the typical common channel. Dedicated traffic channels or connections are assigned using the RACH which is usually synchronized to the BCCH. When a mobile station registers with the network, performs a cell-location update, processes an order, sends small or infrequent data bursts, makes an origination, responds tot a page, or responds to an authentication challenge, it typically uses the RACH. Therefore, the parameters contained in the BCCH transmitted by the base station and received by the mobile station and the parameters transmitted to the based station on the RACH all have a direct function. Jamal et al. uses one or more of those parameters to dynamically allocate an uplink scrambling code to an uplink, dedicated traffic connection associated with the mobile station. Col. 6, lines 23 - 50.

The dynamic resource allocation allocates communication resources implicitly. Rather than sending separate control signals to explicitly identify the allocated resource between the mobile station and the base station, both the mobile station and the base station use information known to them to determine an allocated communications resource. Col. 6, lines 51-65. Signaling or control procedures that must be performed by the mobile station and base station to effect communication via a cellular radio

communications system do not specifically identify a communication resource. Instead the mobile station and the base station may acquire implicitly known parameters, at least one of which is more or less unique to the mobile station. Using this information, the mobile station and the base station determine a communications resource which can be used for dedicated traffic communication. Col. 7, lines 1 – 34.

In case the setup of a dedicated channel resource is required, the mobile station makes a request for a traffic channel over an uplink common control channel, such as a RACH. In this request, the mobile station provides information to the base station that is specific to the mobile station and specific to this particular access. For example, the specific time or time slot at which the access is made and/or specific information conveyed for that access, such as an access reference or signature. Depending on a specific scrambling code selection, generation or determination procedure, both the mobile station and the base station use one ore more of the mobile-specific access parameters and the stored overhead type parameters to generate the uplink scrambling code allocated to the traffic connection dedicated to the mobile station which is thereafter used to scramble and descramble communications over that connection. Col. 7, line 54 – Col. 8, line 6.

Applicant submits that Jamal does not teach or suggest the elements recited in any of the present pending claims. Claims 34, 52, 54, and 58, in part, recite transmitting from the base transceiver station to the plurality of mobile stations, a parameter defining allowed access slots of at least one physically existing random access channel and

receiving the parameter at a mobile station and determining, at the mobile station, the allowed access slots based on the parameter and using. The Office Action cites Col. 6, lines 5-14 and 43-46 of Jamal et al. as teaching the elements of transmitting and receiving as recited in claims 34, 52, 54 and 58. However, upon review, the cited sections of Jamal et al. merely teaches that each base station cell transmits a synchronization signal and a BCCH which indicates system and cell overhead information and is used by the mobile station to obtain initial system synchronization and to provide time, frequency and phase tracking of the base station transmitted signals. According to Jamal et al., the BCCH transmits information, including system identification, cell identification, a network identification and a system frame number. There is no teaching or suggestion in Jamal et al. of transmitting from the base transceiver station to the plurality of mobile stations, a parameter defining allowed access slots of at least one physically existing random access channel and receiving the parameter at a mobile station and determining, at the mobile station, the allowed access slots based on the parameter and using as recited in claims 34, 52, 54 and 58.

Furthermore, the Office Action cites Col. 7, line 57-Col. 8, line 6 and Col. 8, lines 48-57 of Jamal et al. as teaching elements of the claimed invention. These cited passages teach that the mobile station transmits information to the base station in a request for a traffic channel over a random access channel. According to the present invention, on the other hand, the capacity of a single RACH channel should be used as efficiently as possible so that multiple RACH channels per cell are not required. For this purpose,

allowed access slots, of a physically existing random access channel, are defined in a parameter sent to the mobile station as recited in claims 34, 52, 54 and 58. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §102(e) should be withdrawn because Jamal et al. simply does not teach or suggest each feature of claims 34, 52, 54 and 58 and hence, dependent claims 35-51, 53, 55-57 and 59-66 thereon.

Claims 64-66 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jamal '813 in view of U.S. Patent No. 6,643,275 B1 to Gustafsson et al. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claim 58. According to the Office Action Jamal et al. teaches all of the elements of claims 64-66 except that Jamal et al. does not explicitly disclosed wherein consecutive preambles are transmitted a predetermined number of access slots apart.

Gustafsson et al. does not cure the deficiencies of Jamal et al. as discussed above with regard to claim 58. Specifically, Gustafsson et al. does not teach or suggest a mobile station which includes receiving means for receiving, from the network element, a parameter defining allowed access slots of at least one physically existing random access channel for the random access operation, determining means for determining the allowed access slots based on the parameter received from the network element and transmitting means for transmitting a random access message to the network element using at least one of the determined allowed access slots as recited in claim 58. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §103(a) should be withdrawn

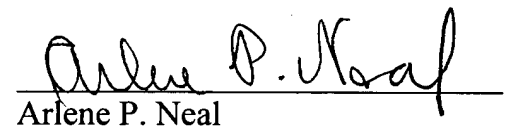
because neither Jamal et al. nor Gustafsson et al., whether taken singly or combined, teaches or suggests each feature of claim 58 and hence, dependent claims 64-66 thereon

As noted previously, claims 34-66 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 34-66 and newly added claims 67-70 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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